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APPLEWORKS Journal

Information & News for AppleWorks Users

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Patch it Again, Sam

A Look at Several Miscellaneous Patches for AppleWorks

One of the biggest crazes with AppleWorks appears to be loading it with as many useful patches as you can find. Lately, there has been a surge of small, miscellaneous patches available for bug fixes, added features, and fun. Most of these patches have come from the Beagle Bros crowd, namely Alan Bird and Randy Brandt; but there are a handful of others you can get.

In fact, there are so many patches that offer all kinds of problem solving that you should never have to accept "NO" from AppleWorks again. If AppleWorks has a problem, find a patch.

Well, that's just what we've done for this article -- compiled a listing of all known patches for AppleWorks, focusing on the little-known patches that you can apply yourself or purchase for $20 or less.

All of these patches require that you have a copy of BASIC.SYSTEM active. In other words, you must be in BASIC, ready to enter BASIC commands. There is a copy of BASIC on your System Utilities disk. Simply exit the utilities; you should see the prompt:

]

You can now enter various command in the BASIC language.

AppleWorks 2.0

AppleWorks 2.0 contains a bug that keeps you from entering the sequence Control-@ into the printer codes screens. Our article about foreign characters in this very issue will demonstrate a need for this capability. Well, issue 2-4 of the Main Menu provided a patch to fix that bug. Here it is again: With the BASIC prompt on the screen, insert your AppleWorks Startup disk and type:

```
BLOAD APLWORKS.SYSTEM,
A$2000,T$FF

POKE 11760,242

BSAVE APLWORKS.SYSTEM,
A$2000,T$FF
```

Make sure you're patching version 2.0 of AppleWorks.

Increase Printing Limits

This one comes from Alan Bird. It increases the number of copies you can print of any file from a maximum of 9 to a maximum of 255. Here's the 2.0 version: You have to do three different patches, one for each of the three modules. Begin by typing one of these three:

Word Processor
```
BLOAD SEG.M1,T$00,L1,A768,
B36074
```

Database
```
BLOAD SEG.M1,T$00,L1,A768,
B9185
```

Spreadsheet
```
BLOAD SEG.M1,T$00,L1,A768,
B65895
```

After typing one of the preceeding commands, type this:

```
POKE 768,255
```

Now conclude with the corresponding one of these:

Word Processor
```
BSAVE SEG.M1,T$00,L1,A768,
B36074
```

Database
```
BSAVE SEG.M1,T$00,L1,A768,
B9185
```

Spreadsheet
```
BSAVE SEG.M1,T$00,L1,A768,
B65895
```

Repeat the process using each of the three sets of commands. If you need to patch version 1.3 or 1.2, we direct you to issue 3-9 of a publication called *Open Apple*. This is a technical newsletter for Apple II users offering insights on hardware and how to enhance your programming techniques.

Issue 3-9 printed this patch from Alan Bird and its own modifications for non-2.0 versions.

Booting AppleWorks

We've published two patches in previous issues that make the AppleWorks boot process faster. One is for people who have copied the AppleWorks Startup disk and the AppleWorks Program disk onto a single disk, such as a hard disk, RAM disk, or 3.5-inch floppy. It eliminates the need to press the space bar when AppleWorks starts up.

The other patch automatically takes the date from your clock card (if you have one) and inserts it into the date screen during the startup process. With both patches active, AppleWorks will boot straight to the main menu.

Rather than repeat the steps, we'll direct you to the issues containing the original patches. The first patch is in Exclusive Reference issue 1-11 and Main Menu issue 2-1. It's also on the disk that comes with the Checkmate Expander for AppleWorks, called *Patch Patch.*

The second patch is in Exclusive Reference issue 1-11. Both patches are also on a "ready to run" program disk available through our catalog of AppleWorks tools. This disk also contains the following patch...

Printing Blanks in Spreadsheet Formulas

Issue 2-1 of Exclusive Reference offered a patch created by Alan Bird that changes the @NA string in the spreadsheet to appear on the screen and on the printer as completely blank information. In other words, any cell containing @NA will appear blank.

This is useful in formulas that otherwise have to calculate to zero. You can evaluate formulas so that they print with blank cells instead. Handy for financial worksheets. As mentioned, this patch is listed in issue 2-1 and is on the patch disk described above.

AppleWorks Reset

This patch comes with all Beagle Bros AppleWorks enhancements, including Super MacroWorks and the Time Out series. It is automatically applied when you use these programs.

Another version is available from a company called Living Legends Software for only $5 on a disk called *Reset.System.* What the patch does is allow you to return to the AppleWorks main menu if AppleWorks ever "freezes" or "hangs up." Simply press Control-Reset and you're back at the main menu. This is useful in that it gives you one more chance to save your data to disk so that you don't lose everything in RAM. It's cheap insurance for RAM expansion owners.

Patch Mania

Patch Mania is a program from Jem Software written by Randy Brandt that installs nine various patches of your choosing. Patch Mainia works with version 2.0 of AppleWorks only.

Four of the patches have already been covered here, including the fix for the Control-@ bug, the increase of printing limits from 9 to 255, the "no need to press space bar when booting" patch, and the automatic insertion of the date from your date clock patch.

Part of the beauty of Patch Mania is that it installs the patches for you, just insert your AppleWorks disk and select the patch you want. It also has the ability to "un-patch" the patches you've installed. All in all, using Patch Mania is easier than entering the codes yourself.

Another patch on the Patch Mania disk will automatically return a "yes" answer any time AppleWorks asks a "Yes/No" question. This alone could be worth the price of the disk if you are sick and tired of confirming everything you do in AppleWorks...when you quit AppleWorks, when you remove unsaved desktop files, when you delete files, and so on. This patch will automatically say "yes" to AppleWorks so you don't have to.

According to Randy Brandt, "Having Patch Mania means never having to say *yes*." Should you be careful when using this patch? Yes!

Another priceless patch for some people is one that lets you choose how AppleWorks will load itself into your extra memory, or if it will load itself at all. Randy calls this one a *Preload Selector*. With this patch you can effectively stop AppleWorks from loading into RAM, you can have it load just the database, word processor, or spreadsheet, or you can have it load normally.

Anyone using an Apple-brand memory card will find this essential if you ever want to load AppleWorks onto a RAM disk instead of having it automatically load into memory. It can also be used to cut down the time involved in pre-loading AppleWorks. See our feature article *Using AppleWorks with Expanded Memory* in this issue for more information about this and other RAM issues.

Patch Mania also includes a patch that changes the AppleWorks error buzz into a tiny, unoffensive "beep." Spreadsheet users might find that one worthwhile.

You can permanently change the way AppleWorks displays files when reading them from a disk with another patch. Rather than displaying spreadsheet files at the bottom, you can choose to have them appear on the top.

Here's one that any word processor user will want: a patch that

saves the position of the cursor with your word processor document, so the next time you read the file from disk, the cursor is just where you left it in the document. Of course, AppleWorks does this when the file is still on the desktop, but once it's saved to disk, the cursor position is removed.

The last two patches on the disk are somewhat obscure. One of them swaps the meaning of the two cursors Insert and Overstrike. Normally, the flashing block is the Overstrike cursor and the flashing line is the Insert cursor. If you find the block easier to see but you don't like using Overstrike, this patch is for you. The last one is for IIGS users. It forces the computer to use the IIe version of AppleWorks and not the IIGS version. Why you would do this if you paid good money for a GS, I don't know. The GS version is much faster.

The Patch Mania disk is quite a value at $20 (including shipping and tax). Often, just one of the patches is worth the price of the disk. to order Patch Mania, send $20 to the address listed at the end of the article.

ExtraWorks

ExtraWorks is a disk by the Electronic Management Workshop that lets you permanently substitute certain printer functions for the ones the AppleWorks gives you on your built-in printer, such as Boldface, Underline, and Scripts.

Sure, you can substitute codes manually using a custom printer setup and the techniques described in this very issue (see *Foreign Characters in AppleWorks* on page 41). But when you use a custom printer setup, you lose many features offered to built-in printers, including proportional print, headers and footers, and various other features depending on your printer brand.

This patch from EMW actually alters the codes for your built-in printer, leaving all the standard features alone and substituting up to four other features. And since the altered printer routines apply to a built-in printer, you can still set up a custom printer for other special functions, such as printing to disk or employing other techniques we've described in past issues.

Conclusion

Patches can be very handy when you really need to fix an AppleWorks problem or add a simple feature. But they can cause problems too. Most of the patches we've discussed here work without problems. But when you start compiling patches on top of other patches, then re-patching, you can end up with uncertain results. This is not meant to discourage you from patching AppleWorks...just be sure to keep your original copy safe.

So, lest you end up with the dreaded "Quilt Syndrome" in AppleWorks, you should carefully decide on the patches that you want to apply to your AppleWorks program. Keep in mind that the more patches you apply, the more chances of them tripping over each other and falling on your data. It's a good idea to apply these simple, small patches before applying large memory expansion patches or accessories.

"Patches, We Got Patches!"

Patch Mania
Jem Software
Box 20920
El Cajon, CA 92021

Electronic Management Workshop
Extra Works
25 Kensington Ave #503
Jersey City, NJ 07304

Living Legends
Reset.System
1915 Froude Street
San Diego, CA 92107

Open Apple
Box 7651
Overland Park, Kansas 66207

Checkmate Technology
Patch Patch
509 Rockford Drive
Tempe, AZ 85281

Sage Productions
Patch Disk
5677 Oberlin Drive
San Diego, CA 92121

Quote Unquote

Regarding computer stocks and the stock market crash:

"When IBM goes down, whos got time to worry about three-dollar stocks?" | John Gantz InfoWorld

Regarding disk labels:

"Around the office, where no diskettes are labeled, I labeled one disk, 'Payroll -- Private' just to see how long it would lie around untouched." | Dan Gookin Byte Buyer of San Diego

Using AppleWorks with Memory Expansion (Part 1)

In Search of the Perfect Setup for AppleWorks

It's a bit ambitious to think I'm going to find the perfect AppleWorks setup. It's pushing it to assume that there *is* a perfect AppleWorks setup. What there *is* is a "best" setup for you and your hardware system. So the real intent of this article is to explain what types of AppleWorks setups are possible, even advisable, for various hardware and software configurations.

The first part of this series will describe the advantages and disadvantages of various setups, including hardware and software. It will also provide some background on just *what* can be done with RAM and some products that are available. Future parts will describe various changes you can make to your AppleWorks system with ProDOS and other software. Then I'll discuss actual steps you can take to install the system of your choice. I'll also explain how you can gain more control over this setup and change it from time to time without going insane.

With this information, you can decide how you want to run AppleWorks on your system, given the software you are using and intend to use.

Pick a Card...

Here's an easy place to start: if you don't have a memory expansion card, your choices are diminished drastically. You don't get to decide on various memory configurations; you don't get to set up a RAM disk; and you don't get to worry about software compatibility with your memory expansion card.

What you do get to think about are the various patches and software setups you can add to AppleWorks. These include mouse interfaces, changes to ProDOS, adding accessories to AppleWorks, and various miscellaneous patches you can install.

But the main focus in this article is on memory expansion. Two important things you get with memory expansion are RAM disk capabilities and larger capacities in AppleWorks... or both.

RAM Disks

If you were to plug in a RAM expansion card and then run your old, unaltered copy of AppleWorks, AppleWorks would not know that you have extra memory and you would still have only a 55k desktop, a maximum of 250 lines on the clipboard, and other standard capacity limits. Unless you enhance AppleWorks, your RAM does not affect AppleWorks' limits.

The exception to this rule is if you use AppleWorks 1.3 or 2.0 with any Apple brand memory expansion card, including the GS. AppleWorks versions 1.3 and 2.0 automatically recognize Apple brand memory cards and enhances the limits of AppleWorks. These versions also automatically load your AppleWorks program into RAM when you start up. This makes AppleWorks run much faster. This feature is also available with non-Apple brand expansion cards. More on the auto loading topic later in this article.

So what happens to memory if AppleWorks doesn't use it or even know its there? It is available as a storage place for your files -- including data files and program files. That's a RAM disk. You can read and write to RAM just like you do with a floppy disk. You can place anything onto a RAM disk that you can place onto a floppy disk.

Unfortunately, AppleWorks still does not know that the RAM disk is available, so most RAM expansion cards come with a RAM disk installation program. These programs usually let you allocate as much of the extra memory to RAM disk as you like. The programs usually do two things: they install a RAM disk for you using any amount of your available RAM for the RAM disk, and they alter AppleWorks so that it "sees" the RAM disk as any other disk. If you have 512k of RAM, for example, you can allocate 320k of it to RAM disk, leaving 192k for AppleWorks expansion of the desktop and other limits. But just because you've allocated 320k for a RAM disk doesn't mean AppleWorks will recognize it. That's what the installation programs are for.

Generally, you have to install the RAM disk each time you start the computer.

NOTE: Most programs, including AppleWorks, require the installation before they recognize RAM as a disk. ProDOS itself, however, knows the RAM is there with or without the installation.

Reasons for having a RAM disk include the ability to load programs into RAM (i.e., onto the RAM disk) and run them from

RAM. This makes them *much* faster. In AppleWorks' case, there is no delay when moving between the three modules. A RAM disk is also the most efficient use of extra memory, requiring very little overhead for configuration (more on this later).

Many RAM users opt to use a RAM disk for mass storage instead of a hard disk. You can now get up to 8 megabytes of RAM and attach separate power supplies to it, making it a fairly stable place to keep information. Of course, this kind of setup requires that you leave the computer on at all times since information stored in RAM is gone when the power goes off. On the other hand, it's a lot cheaper and faster than other mass storage devices and is treated in all the same ways by your software.

To get AppleWorks or anything else onto a RAM disk requires that you first configure a RAM disk and then copy AppleWorks onto that disk using a copy program, such as Copy II Plus or your system utilities. Again, this has to be done each time you start up the computer.

Auto Loading AppleWorks

If you already use a memory expansion card with an AppleWorks expander, you probably know about the ability that these products have to automatically load AppleWorks into RAM upon starting up. This is *not* the same as copying AppleWorks to a RAM disk and starting up from the RAM disk. Auto load is just that...automatic. You don't have to configure a RAM disk for it to work -- and it works automatically upon startup. You can't boot AppleWorks from RAM with the auto load setup because the startup files are not in RAM as they are if you use the RAM disk setup. And, of course, starting up from RAM is a lot faster.

As mentioned earlier, if you have an Apple brand memory expansion card and version 1.3 or 2.0 of AppleWorks, you'll experience the auto load feature whether you like it or not. These versions automatically load the program into your Apple RAM. This can be a problem if you want to put AppleWorks onto a RAM disk instead. Somehow you have to disable the auto load feature.

Our cover story this issue tells about a patch that lets you cancel these auto load routines. And in a future segment of this article, I'll show you a program that will let you keep the auto load feature but control the amount of desktop it gives you in AppleWorks. By limiting the desktop, you can reserve more memory for RAM disk if desired, and vice versa.

Expanding AppleWorks

Another way to use your extra memory is to give AppleWorks access to it. This means an increase in the desktop size, clipboard limits, line limits in the word processor, record limits in the database, and more. This also requires that you use some kind of AppleWorks Expansion software (unless you have version 1.3 or 2.0 with an Apple RAM card). Most popular brands of memory hardware also come with AppleWorks expander software. Different expanders offer different advantages. Some are better at conserving memory and passing it to AppleWorks for desktop space, others offer special features, such as print buffers.

Some expansion software will work with any RAM card you have in the computer, as does Checkmate's *MultiRAM* product. Others will work only with the same manufacturer's card, such as Applied Engineering's *Super AppleWorks Desktop Expander* product. Unless you indicate that you want a RAM disk in addition to the increased desktop in AppleWorks (you *can* have both), the expansion software will probably assume that you want all of your extra memory allocated to desktop space for AppleWorks. Any memory not allocated to RAM disk is used for desktop space.

Unfortunately, when using RAM for desktop space, you might notice a difference in the amount of RAM you have on your card and the amount that got added to the AppleWorks desktop. Somehow, the desktop comes up short by about 25%. For example, a one megabyte RAM card will produce from 700k to 800k of desktop space after expansion.

The reason for this difference is that the design of the Apple II memory management renders a certain amount of each bank of memory useless for main memory. So the more memory you have, the more you'll notice this difference.

The advantages of having a large AppleWorks desktop are dramatic -- and I seriously recommend that you reserve some portion of your extra RAM for desktop increases even if you're sold on the RAM disk idea.

The Best Of Both

For most people, the most sensible thing to do regarding extra memory is to allocate some of it to RAM disk and some of it to AppleWorks expansion. But deciding just how much you need for each can be a challenge. The decision is largely affected by the way you use AppleWorks and the AppleWorks add on products you use.

Typically loading anything and everything you can onto a RAM disk is a good thing. It increases the speed of operation significantly. If you use Pinpoint accessories, for example, you'll find a RAM disk something close to a

miracle. If you often leave AppleWorks to run another program and then return to AppleWorks, a RAM disk can make switching programs fast and painless. Add a program selector to RAM disk and you're on your way to having an ideal system. (Several program selectors are reviewed and compared in issue 1-11 of Exclusive Reference.)

You can either copy AppleWorks to a RAM disk and run it "out of RAM" without delays between the modules. In this case, you would not want AppleWorks to auto load into RAM. On the other hand, you can opt for the auto load feature and use a much smaller RAM disk for data files and other programs. In this case, you would have more memory for desktop expansion.

The down side of using a RAM disk is that you have to configure it and copy the programs and data files to it each time you start your computer. I'll discuss ways of automating this in the next part of this article.

Another disadvantage is that the more memory you use for RAM disk, the less you have for an expanded desktop in AppleWorks -- and expanding the desktop is the only way to allow larger files in AppleWorks.

The new Time Out series of AppleWorks add on products can be loaded to a RAM disk *or* onto the AppleWorks desktop with AppleWorks. Loading them onto the desktop is very simple and requires no special tricks prior to starting AppleWorks. Both methods are faster than keeping them on disk and you probably won't notice any speed difference either way.

However, as mentioned earlier, RAM is more efficiently used by a RAM disk than by the AppleWorks desktop -- though more difficult to configure and use. If you're ready for it, I suggest loading Time Out Applications to RAM disk instead of loading them onto the desktop.

The Last Consideration

So far we've got some general rules about RAM and AppleWorks. First, it's good to allocate at least part of your extra RAM do desktop expansion. Second, when considering how much (if any) RAM to allocate to RAM disk space, decide whether the improved performance is worth the extra hassle in setup time and if there aren't some alternatives or compromises you can make.

The final consideration is how long you are willing to wait for AppleWorks to start up. If you start AppleWorks in the morning and leave it running throughout the day, it might be worthwhile to wait a bit longer for the improved performance.

If you constantly enter and exit AppleWorks during the day (i.e., use other programs without turning the computer off), you're still a likely candidate for RAM disk since it lets you move between programs quickly and the startup process is faster when programs are loading from a RAM disk.

If you don't like the idea of a lengthy startup process, or if you need to turn the computer off several times during the day, you might opt for the simple and effective solution, which is to use most of your memory for desktop expansion and possibly opt for the automatic loading feature if you're willing to wait a little longer. If you use the Time Out add on software, this will still be a good setup. If you use Pinpoint or other products, it might not be such a good setup.

ProDOS

Many people replace the ProDOS that comes with AppleWorks so they can enter BASIC or ProDOS commands after quitting AppleWorks. If you don't replace the ProDOS with a copy from some other program (such as the copy on your system utilities disk), then you really can't do much upon quitting AppleWorks, except re-boot the computer.

You'll find a lot of people who replace their ProDOS with a copy from one of the Beagle Bros or Software Touch disks. That's because the ProDOS on these disks contains an added feature called "Bird's Better Bye," which lets you view all system files in any disk drive active. For more information about Bird's Better Bye, see issue 1-11 of Exclusive Reference. You can use any copy program to replace the ProDOS on your AppleWorks disk with one from another disk.

Replacing the ProDOS gives you at least two advantages. First, if you have a 3.5-inch drive (or any other mass storage device), it gives you access to other programs on the disk. Second, it lets you set up any "pre-boot" process that you choose for AppleWorks.

Continued on page 45

Random Tip

Using Markers

Many AppleWorks users don't find markers a big benefit in the word processor. The Find command with the *Text* option often works as well when you want to find specific locations in a document.

One good way to use markers is to temporarily mark your location when you need to move away from it to work elsewhere in the document. Set the marker, do what you have to do, then return to the location using the marker.

Tips & Tricks

Using the Find and Replace Commands to the Max

The Find and Replace commands in the AppleWorks word processor can be tricky in some situations. When replacing words that might possibly appear both at the beginning of a sentence and in the middle, do you use the *Text* option or the *Case sensitive text* option? The word will begin with an upper-case letter when it begins a sentence and a lower case letter when it does not.

The fact is, that in this case, you have to use the Replace command twice -- both times using the *Case sensitive text* option. If you accidentally use the *text* option and get lower case versions of the word appearing at the beginning of a sentence, there is no automatic way of correcting the problem. You'll have to re-replace the words using the *One at a time* option and manually change those that begin sentences.

Another potential hazard stems from the fact that the Replace command will find your word even if it appears as a portion of another word. If you replace "card" with "form," you will be replacing the *card* in *discard,* resulting in *disform.*

Of course the answer to this dilemma is to surround the word with spaces, as in " card ". This will ensure that only single words will be replaced. Be sure to surround the replacement text with spaces also, otherwise, you'll end up with another fine mess that cannot be unmade automatically.

This "partial word" feature can be useful and it's designed to save you the effort of using the Replace command twice when your word might include an "s" on the end for pluralization.

Replacing *card* with *form* would automatically turn *cards* to *forms* (yes, it would also turn *discards* to *disforms*. Sometimes you just have to sacrifice automation for accuracy).

Did You Know?

Database Files

Did you know that you can read an AppleWorks database file with the word processor? If you use the *From a text (ASCII) file* option when starting a new database and then type the pathname of a regular database file, you'll get that database file into a word processor document. You'll see a lot of # characters separating the categories and maybe some extra #'s thrown in at the top of the document. You can use the Replace command to change the # characters into something else (or into nothing). Better yet, use a macro to place a carriage return where each # appears. You can then read the data back into the database using a text file. This might be one way of repairing damaged database files.

Printing Spreadsheet Formulas

Did you know that if you print spreadsheet information to the clipboard when the formulas are showing with Open Apple - Z, you'll end up with the formulas on the clipboard -- not the values in the cells? So far, we haven't thought of a good reason for doing this but we're sure you find it comforting to know that you can do it if you have to. Let us know if you think of a good use for this.

Foreign Characters In AppleWorks With Imagewriter Codes

Feature

Last month we described some special codes for the Imagewriter II printer that provide graphics capabilities within AppleWorks. This month we have some more special ImageWriter codes that are useful for printing foreign characters from within AppleWorks.

If you've ever had the need to print special foreign characters from the AppleWorks word processor, you may know how much trouble it can be. While the keyboard has acceptable (although not ideal) characters for accents, such as é or ñ, it's difficult to get the accents over the characters without introducing a set of problems.

But then there are the challenging characters, like ü and ç and å, and special symbols, like £ or ¿. How do you propose to print those from the word processor?

We have two sets of codes that you can employ with the Imagewriter II to help make AppleWorks more worldly.

Employing the Control - H Code

Many foreign characters require the combination of two characters. The Imagewriter's *Control-H* code prints the first character, backspaces one space, then prints the second character over the first. By choosing various character combinations, you can get some interesting results.

Step One

The first thing to do is set up a custom printer. Do this by entering option 5 from the main menu, then option 7. If you have three printers established, you'll have to remove one before starting a new one. If one of your printers is a custom printer already, you'll have to remove it, since AppleWorks allows only one custom printer.

Add a printer with option 2, then choose printer number 12 (custom). Choose an appropriate name and indicate the slot or port from which the printer is accessed. You are now able to specify printer codes for the custom printer.

The result of this technique is to substitute our special Control-H code for one of the other code categories, such as Boldface Begin.

Step Two

Choose the codes for the Boldface Begin function, the screen should look like Figure 1. Before enter-

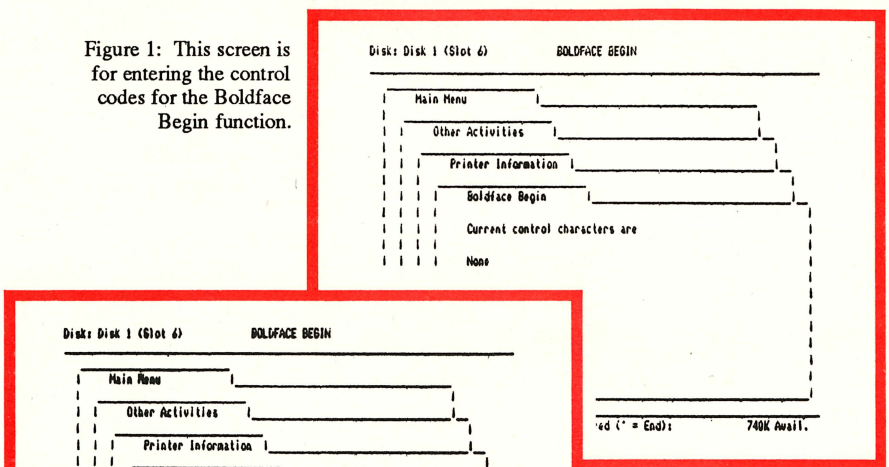


Figure 1: This screen is for entering the control codes for the Boldface Begin function.

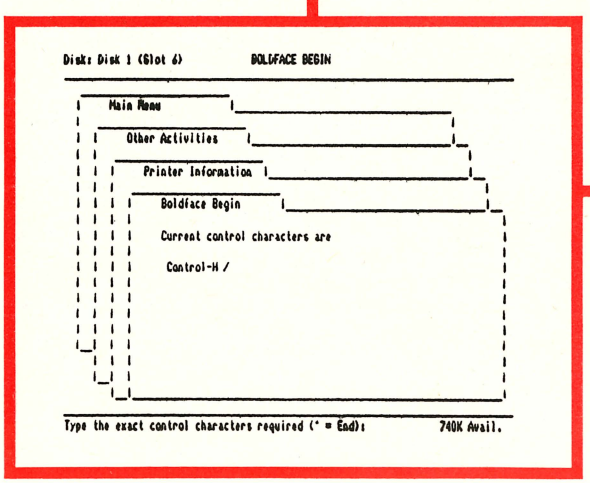


Figure 2: Enter this code and you can type the / character over any other character. You can use any character where the / appears for various results.

ing the Control-H code, decide on the character that you would like to create with the combination of other characters. Suppose we're going to create the symbol ¢ with the combination of a "c" and a "/". Enter the following into the Boldface Begin control code:

Control-H /

Hold the control key down and tap the H key, then press the / key. Press ^ (Shift 6) when finished. Figure 2 shows the result.

In your word processor document, simply enter the Boldface Begin command (Control-B) just after the character "c" when you want to create the ¢ symbol. Your document might look something like this:

John paid only 5c^ for
the item.

The character ^ represents the Boldface Begin marker. This setup works with many character combinations, such as " " and "ø". To form other combinations, simply alter the character following Control H in the code sequence. Use different code categories to have several active at the same time. Here are some suggestions:

î	i and ^
é	e and '
á	a and '
£	L and -
ç	c and ,
©	O and c

Use your imagination for even more special characters and symbols.

Using Foreign Character Sets

Another way to get foreign characters in AppleWorks is to use the Imagewriter's special foreign character sets shown on page 75 of the Imagewriter II manual (see Figure 3). Many printers have foreign character sets and this technique will work with any of these printers.

The technique is similar to the previous one in that it requires substituting codes into certain code categories. In fact, you can follow the steps of the last technique up to the point of entering the actual code into the Boldface Begin category. Instead, enter the code that activates the desired foreign character set.

Unfortunately, it's not that simple because of limitations in AppleWorks. At this time version 2.0 of AppleWorks does not allow the sequence *Control-@* in the codes screens. As you can see from the codes in Figure 3, most of them require that sequence. So you'll have to use version 1.3 or earlier versions, or fix version 2.0 with the patch shown earlier in this issue. Version 1.3 and previous versions do not allow the sequence *Control-C*. So, either you attempt a fix to the version 2.0 problem or you don't use British or German character sets.

When you do get one of the sets working, simply type the American character to get the appropriate foreign character on the printer. You might have to restart AppleWorks after entering the codes for the program to recognize that you've made the changes.

American	#	$	@	[	\	]	^	`	{	|	}	~
British	£	$	@	[	\	]	^	`	{	|	}	~
German	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
French	£	$	à	°	ç	§	^	`	é	ù	è	¨
Swedish	#	$	@	Ä	Ö	Å	^	`	ä	ö	å	~
Italian	£	$	§	°	ç	é	^	ù	à	ò	è	ì
Spanish	£	$	§	¡	Ñ	¿	^	`	°	ñ	ç	~
Danish	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~

Figure 3: Table of foreign characters on the Imagewriter reprinted from the Imagewriter manual page 75.

Also, the control codes that access the various character sets.

Language	Access
American	ESCAPE Z CONTROL-G CONTROL-@
British	ESCAPE Z CONTROL-D CONTROL-@ ESCAPE D CONTROL-C CONTROL-@
German	ESCAPE Z CONTROL-C CONTROL-@ ESCAPE D CONTROL-D CONTROL-@
French	ESCAPE Z CONTROL-A CONTROL-@ ESCAPE D CONTROL-F CONTROL-@
Swedish	ESCAPE Z CONTROL-B CONTROL-@ ESCAPE D CONTROL-E CONTROL-@
Italian	ESCAPE Z CONTROL-F CONTROL-@ ESCAPE D CONTROL-A CONTROL-@
Spanish	ESCAPE D CONTROL-G CONTROL-@
Danish	ESCAPE Z CONTROL-E CONTROL-@ ESCAPE D CONTROL-B CONTROL-@

Letters

Multiple Records and Printing Labels

I would greatly appreciate a response to this nagging problem I've had for years: If a customer has, say, five entries in a database, how do you get only ONE letter sent to the person when using mail merge (or anything else)?

Harold Miller
Oceanside, New York

We've seen this question before. It seems to be a common need. One answer printed in issue 1-8 of Exclusive Reference suggests using two databases for your customers. Here's the best way to manipulate two databases for this purpose:

Create your database that will contain all ordering information and customer information. Now make a duplicate of this database. Call one copy "Customers" and the other "Orders."

Your Customer database will be the permanent client list containing only one entry for each client. It will contain only the name and address information -- not ordering information. Most of the categories in this file, therefore, will be empty. Instead, enter orders into the Orders database; enter as many orders for each client as you like.

Rather than re-typing client names and addresses for the orders file, keep both databases on the desktop at all times and copy existing client records from the "Customers" database to the "Orders" database using the Open Apple - C command with the *To clipboard* and *From Clipboard* options. Now simply fill out the empty categories in the copied record.

When a new customer is added to the client list, be sure to place the customer on the Customers database first. Use the Customers database for printing labels and the Orders database for statements, bills, and other business reports.

You may also find the article *Using Database Group Totals* from issue 1-2 of the Journal helpful for this task.

Another option is to purchase ReportWorks from Megahaus and set up a sort of "relational" database structure using two or more files. See Exclusive Reference issues 1-8 and 1-1 for more details.

Yet another option is to use a macro that will purge duplicates out of your databases. You can purge the duplicates just before printing labels and not save the changes. This macro is available on the *Publisher Macros* disk offered in our catalog for $19.95. It works with Super MacroWorks.

There you have it! Several ways of overcoming the problem (or at least making it less of a problem).

More on Numbering Pages and Versions of AppleWorks

The August issue of the Main Menu discussed page numbering. I have a more detailed answer for those who might need it.

1. After you set up the page header or footer with Open Apple-O and the HE or FO option, you can put the cursor where you want the page number (left side, right side, middle), then press Open Apple - O and the PP option. You can put the word "Page" just before the PP option if you want that printed with the page number.

2. If you want the numbering to start on page 2, press Open Apple - K to calculate page breaks, then find the beginning of page 2. Type Open Apple - O and PN, then "2" to start numbering with a 2. Now enter the PP option inside the header or footer as in step one.

Also, I am interested in finding out about the different versions of AppleWorks. I have version 1.1. I called the local Apple dealer and didn't get much satisfaction.

Priscilla D. Cameron
Wyoming, Pennsylvania

Thanks for the details, Priscilla. Another handy thing about the Open Apple - K command is that you can use it to check your changes in the numbering sequence using the PN option. In other words, calculated page breaks will display the number that will be printed on the page, accounting for any changes you make using the PN option.

There is really no need to use the PN command unless you are changing the natural flow of page numbers. Page 1 is still page 1 even if you don't print the page number on it. If you want to simply omit the number from page 1, enter the PP command on page 2. If you want to begin numbering the first page of the document with page number 33,

then use the PN command to change the number to 33.

We're about due for another overview of the various **AppleWorks versions**, so here's the scoop. Get rid of version 1.1 for good! It's about the oldest version you can find (version 1.0 was not out long) and it has bugs relating to printers. Version 1.2 fixed the printer problems and added the ability to send codes to printer interface cards. This version works with most third party hardware (memory expansion) but does not always access all the memory in more recent cards. Version 1.2 was a free upgrade from your dealer.

Version 1.3 was introduced in December of 1985 and was made compatible with Apple's memory expansion card, providing a larger desktop and the auto load feature. This upgrade was $20 from your dealer unless you purchased Apple's memory expansion, then it was free.

Version 2.0 has the most changes in it. It adds the internal mail merge feature and some functions in the spreadsheet, including @AND, @OR, @ROUND and the ability to copy or move values without moving the formulas that produce the values. This version also works with the GS in that it automatically accesses the extra memory and allocates it to desktop space. You also get more capacity in the spreadsheet when you have Apple's memory expansion or a GS.

Other differences in version 2.0 include an option to let you save large files on disks that previously would be considered too full. Basically, you can opt to trash the existing copy of the file prior to saving the new copy. This version handles Text (ASCII) files differently in that it *always* adds carriage returns to the ends of lines when you save a file as a Text or ASCII file. Version 2.0 introduced a few bugs, including the inability to accept the string *Control-@* in the printer codes screens and a problem with mail merge documents when the first line is a merged category *and* turns out to be blank.

Finally, this version uses different logic in certain spreadsheet operations. For example, in earlier versions, you can enter:

@IF(C5=A1+100,1,0)

This would mean, "if the value in C5 equals the sum of A1 and 100 then return a 1, otherwise return a 0." In version 2.0, you must type the same formula this way:

@IF(C5=(A1+100),1,0)

Notice the parentheses surrounding the calculated value.

Version 2.0 was once available for $50 from Apple but the upgrade offer is off for good. Now you'll have to purchase it from a dealer. Oh, and version 2.0 comes with a new manual -- a very good one.

Copying & Moving with Feedback

I'd like to see a change in the Copy and Move commands in the word processor so that the line number still rolls up at the bottom of the screen after Return has confirmed the text to be moved. Moving text would really be speeded up by being able to scroll back to a specific line number to insert the moved text.

James McBride
Houston, Texas

The line and column indicators at the bottom of the screen are obscured only when copying or moving text using the *Within document* option. The best alternative is to copy or move text using the *To clipboard* option, then move to the new location using the indicators at the bottom of the screen. Insert the text by moving it *From clipboard*.

Now You See It Now You Don't

Recently I saved an AppleWorks file and, a few minutes later, added it back to the desktop. According to the Save Files menu in AppleWorks, the file was 127k in memory (on the desktop). But according to the Add Files menu, the same file was only 71k on disk. Similar comparisons for other files showed roughly a 40% difference between a file on the desktop and a file saved to disk, although it depended on how large the file was. I assume the difference represents some sort of "overhead" that AppleWorks needs. Can you explain?

Matt Cole
Lakewood, Colorado

Alan Bird of Beagle Bros and Software Touch fame clarified these memory quirks for us. AppleWorks was designed for 64k and 128k systems and used a small amount of memory (about 2 bytes) to locate and identify the storage places of your data in memory. When expanded memory is added to the system, the original two bytes is not enough to handle all the possible locations for data -- so the accessible locations in memory are greatly reduced to the point where certain banks of memory are virtually useless.

The more extra memory you have, the more dramatic the difference can be. You can end up with short lines of text in a word processor document occupying as much memory as a full line of text would take -- regardless of what's on the line. You can experiment with documents containing only one character per line and see how inefficient the memory usage is.

DIF Information Request

I wonder if you can tell me where I can find more information regarding the DIF or Data Interchange Format. DIF is mentioned several times in the Appleworks manual but I cannot find any details anywhere here in Rome. Where can I find more information?

Vincent P. Gambino
Rome, Italy

We have one of the original documents written about DIF file structures, here's what it says about the purpose of DIF:

"The basic goal of DIF is to allow the interchange of data among a wide variety of programs. The type of data addressed by DIF is data that is stored in tables -- columns and rows."

Programmers Guide to DIF
Software Arts Technical Note

The document goes on to explain the actual formatting of DIF files and gives BASIC programs that read and write DIF files. Since none of the addresses or phone numbers listed in the twelve-page publication produce anything that would indicate an existing company, we'll photocopy the publication for anyone who requests it.

Desktop Publishing and AppleWorks

I have been using my Apple IIc with 1 megabyte of RAM, AppleWorks 2.0, and Super MacroWorks. I have a daisy wheel printer. What other software do I need to go with AppleWorks to get the "desktop publishing" look? Graphics is not important as we plan to physically cut and paste original art (no computer output we've seen is sufficient).

I want multiple columns, hyphenation and good right justification. I want to be able to move things around on the page to make things fit. Will a IIc with AppleWorks drive a laser printer? Can I take my AppleWorks disks to someone with a laser printer and have them printed. I want different fonts and sizes. Do I want too much for my IIc and AppleWorks? Can I go to the GS and get what I want and still keep AppleWorks? Do you use AppleWorks to put out your Journal?

Gale Noble
San Diego, California

Okay, we admit it! We use the Macintosh to produce the Journal. Quite frankly, if you need the kind of quality you see here, there is *nothing* in the Apple II world that will match it. IBM users have been trying for the last two years. The Macintosh has truly opened up this capability.

But don't let that discourage you. Desktop publishing is getting better and better for the Apple II and AppleWorks. You might not be getting the Macintosh look, but you also won't be paying Macintosh prices!

As for creating multiple columns in AppleWorks, the method described in issue 2-4 of Exclusive Reference is about the best way to format columns without leaving AppleWorks. As mentioned in that issue, we designed some macros for Super MacroWorks that automate the process. Combining this technique with font downloading programs gives you more control over fonts -- but you don't get much in the way of sizes. You *can* use the techniques with the new Time Out Super Fonts from Beagle Bros and get a lot more in the way of sizes and styles with multiple columns.

If you don't mind going outside of AppleWorks, you have a few more choices. Printrix from Data Transforms takes your existing word processor document and lets you format it in multiple columns outside of AppleWorks -- and then print with various fonts and sizes. Printrix can also include graphics in the printout.

Another choice is to purchase a program specifically made for multi-column formatting. You would not use AppleWorks to create your documents. One such product is called Personal Newsletter from Softsync, Inc. Luckily, PN can import your AppleWorks files if you save them as Text (ASCII) files first.

We have these products up for comparitive review in a future issue -- we'll be providing sample printouts from each so you can see exactly what they can do.

So far there is no easy way to access the Laserwriter with an Apple II computer. A few months ago we predicted that Beagle Bros will turn out such a product (or a Laserwriter interface for their existing products). If you're interested in printing to the Laserwriter from AppleWorks, we have a pamphlet describing the steps required. Send $7.95 for the complete instructions to Laserwriter Pamphlet, 5677 Oberlin Drive #100, San Diego, CA 92121.

Personal Newsletter
Softsync, Inc.....(212) 685-2080

Printrix
Data Transforms.....(303) 832-1501

Super Fonts
Beagle Bros.....(619) 296-6400

Formatting Macros
Sage Productions, Inc....(619) 455-7513

Finding & Replacing Carriage Returns

When converting an ASCII file to a word processor file, if it was formatted with carriage returns ending each line, they must be removed. Is there another way besides the manual delete?

Second, if an ASCII file from a database program uses a "#"or

"," as *a delimiter, the Replace command in the AppleWorks word processor will not turn them into carriage returns; so I do it manually then read this corrected file into the AppleWorks database. Any shortcut?*

Mrs. Karl H. Jens
Tamagua, Pennsylvania

The first problem can be solved easily with Super MacroWorks. Using its <Find> token in the word processor, you can automatically find all carriage returns and delete them. Here's the macro:

```
START
A:<AWP><FIND><RIGHT>
  <DEL><SPC><SA-A><RPT>!
```

This will also work with UltraMacros. If you use other macro products, you'll have to use a different technique, such as jumping to the beginning of each line and appending it to the end of the previous line using backspaces.

A delimiter is the character that separates one field from the next in a database data file. Normally you don't see these delimiters except when you're converting data.

To read information into an AppleWorks database, you need to strip out any delimiters that might have come from the other program and turn them into carriage returns. AppleWorks uses carriage returns to designate one field from another when reading it in from a text file.

As you mention, the word processor does not allow carriage returns in the Replace command so you'll have to use a macro to search for all delimiters and replace them with carriage returns. Any macro program will do this. The following is how Key Player does it.

```
MACRO(D)
{
    <A-F><RETURN><A-Y>,
    <RETURN><RETURN><RIGHT>
    <DELETE><RETURN><REPEAT,99,
    <D>>
}
```

This macro searches for comma delimiters using Open Apple - F, then it deletes the comma and enters a carriage return. The macro is repeated 99 times.

Telecommunications In AppleWorks

I have been wanting to set up a telephone program for a long time. I have AppleWorks with Pinpoint on it. I want to get the most economical modem. I was told I could set it up so I would merely type the name of who I wanted to call and my computer would dial the phone for me. Can you help me?

Dr. Ken Bryant
Vancouver, Washington

It's difficult to recommend a modem when there are so many good ones available. To make the best choice, learn what it means to be "Hayes Compatible" and the difference between a "smart" and "dumb" modem.

As for communications programs, there are two that work inside AppleWorks so you can dial the phone without leaving the program. Pinpoint's basic accessories comes with a dialer that calls numbers for you inside AppleWorks. It also has the ability to store a handful of numbers that you call frequently so you don't have to look up the number.

On the other hand, if you're in AppleWorks, you can always keep your phone numbers in a database file and look them up with the database Find command before using the dialer. If you have Pinpoint accessories, you probably already have this program.

The Time Out Desktools package from Beagle Bros also has a phone dialer on it with many of the same capabilities as the Pinpoint dialer.

Pinpoint...(415) 654-3050

Random Tip

Printing Labels

When printing mailing labels from the database, it's often difficult to get that first one lined up correctly. Sometimes you end up wasting several labels just to make adjustments.

Try copying the first record in the list about four or five times just prior to printing. Use the Open Apple - C command in the multiple record layout. When you go to print the labels, you'll have four or five extras at the beginning of the database. If you make adjustments after the first label has printed, you won't be messing up important labels. You can erase the extras when you're through printing.

RAM

Continued from page 38...

If you change ProDOS like this, you'll need to know some ProDOS basics. In future installments of this article, you'll learn some ProDOS basics and how to set up some general pre-boot routines. You'll also discover some programs that you can use to make your expanded life easier.

Review: File Master

Organization Inside AppleWorks

File Master is one of the seven Time Out applications from Beagle Bros. It's a remarkably simple program that adds basic file and disk utilities to AppleWorks. File Master will probably replace your system utilities disk and give you all the copying, formatting, renaming, and listing features you've come to require on the System Utilities disk that came with your computer.

File Master also duplicates many of the features in other copy programs, such as Copy II plus. But you might not find it a complete replacement for the more specialized copy programs.

If you already have Time Out installed on your AppleWorks disk, simply copy the file

TO.FILEMASTER

to the disk containing the other applications. The installation of Time Out is simple and painless.

Open Apple - Escape displays your Time Out applications from which you can select FileMaster. The FileMaster main menu appears as shown in Figure 1. As the main menu demonstrates, the program is very simple: you have a set of options for working on files (Figure 2) and a set for working on disks (Figure 3). Option 3 on the main menu merely displays FileMaster's version number and copyright notice.

But the first thing to do after you place FileMaster onto the applications disk and boot AppleWorks is to configure it using the Time Out Utilities. (The Utilities come with all Time Out applications but only one copy needs to appear with the other applications.) The configuration options are shown in Figure 4. Configuration consists simply of indicating the disk locations that FileMaster will use as defaults (i.e., unless other locations are specified) for copying and comparing files.

The commands and options work just as you might expect. In the Disk Activities menu, some of the nicest features include the *Rename directory* option which lets you change the name of a disk, and the *create a subdirectory* option which lets you add a subdirectory to a disk.

Continued on page 48

Figure 1: The FileMaster main menu

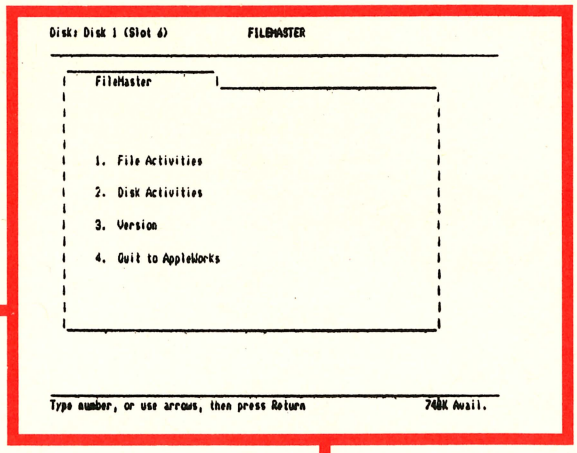


Figure 2: The File Activities menu

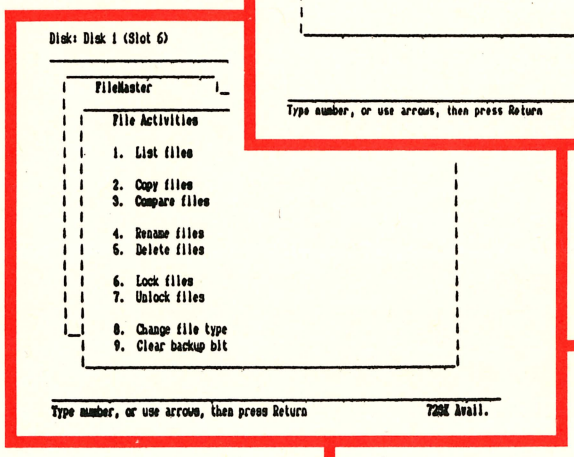
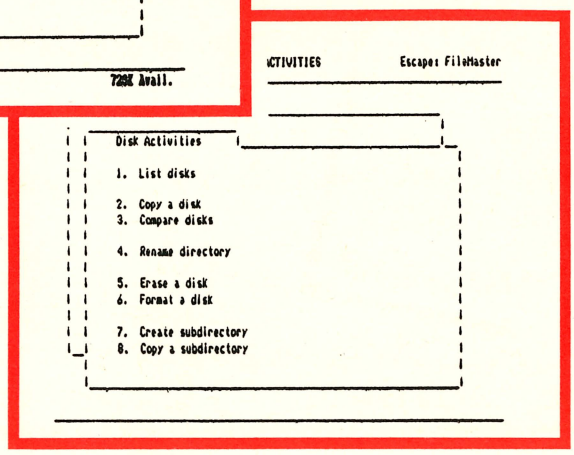


Figure 3: The Disk Activities menu in FileMaster



News

OUR LIBRARY of AppleWorks tools is growing every week. There are so many AppleWorks products available now that we can't keep up with the reviews. Here are some recent arrivals that we hope to review soon:

AppleWorks Videos. A set of five video lessons on using AppleWorks by Videoware Productions.

Templates & Lessons. A package containing an AppleWorks lesson book (learning AppleWorks) and dozens of templates to go with it. It's called *HelpWorks* and it's by HelpWorks Software Corp.

More Lessons. Another book teaching AppleWorks, entitled *Hands On AppleWorks*. This one is geared toward classroom instruction and comes with a teacher's guide. By Computer Literacy Press.

Desktop Publishing. *Printrix*, by Data Transforms, is a program that lets you format your AppleWorks word processor documents into multi-column pages using a variety of fonts.

New Technology. Out of the seven Time Out products from Beagle Bros, we have not yet reviewed 5: *Ultra Macros, Desktools, SuperFonts, Graph, and Sidespread.*

Here are some products that we have reviewed, and the issues in which we reviewed them.

Time Out Quickspell
Beagle Bros ..... AWJ 1-2

Time Out FileMaster
Beagle Bros ..... AWJ 1-3

Time Out Overview
Beagle Bros ..... AWJ 1-1

Macro Disks for
Super MacroWorks &
Key Player ..... ER 2-4

Random

PathFinder
Jem Software ..... ER 2-3 MM 2-4

Patch Mania
Jem Software ..... AWJ 1-3

Public Domain
Template Library ..... ER 2-2, ER 2-3

Graphics Dept.
Sensible Software ..... ER 2-1

Visualizer IIe
PBI Software ..... ER 2-1

Key Player
Pinpoint ..... ER 1-12

Super MacroWorks
Beagle Bros ..... ER 1-11 MM 2-3

Sideways
Funk Software ..... ER 1-11 MM 1-3

Run Run
Bird's Better Bye
ProSel ..... ER 1-11 MM 2-3

InfoMerge
Pinpoint Publishing ..... ER 1-9

FontWorks
Power Print
Print Quick
Printer Control Program
Other print enhancements ..... ER 1-8 MM 1-3

ThinkWorks
Megahaus ..... ER 1-4

ReportWorks
Megahaus ..... ER 1-1

Zip Files Templates
Petit Design ..... MM 2-8

AppleWorks Video
PCR Video ..... MM 2-7

CommWorks
PBI Software ..... MM 2-6

ExtraWorks
EMW ..... MM 2-5

Visualizer IIGS
PBI Software ..... MM 2-1

SchoolWorks & GradeWorks
K12 Micromedia ..... MM 2-1

Tax Templates & Forms
Various Vendors ..... MM 1-3

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About the Journal

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To avoid confusion, we use a few conventions when referring to AppleWorks commands and options. Commands refer only to those keystrokes that include the Open Apple key and options refer to menu choices or choices listed at the bottom of the screen as the result of typing a command. Options are always listed in italics, as in:

...now print the file *to disk*.

Spreadsheet cells are shown along with the name of the cell, as in:

A1: +C34*5

Key presses that are not commands are capitalized, such as in Return, Escape, and Down Arrow. Macros are shown in the format of the macro language being used in the example. We use the term *category* in place of the more common term, *field* because the AppleWorks manual uses category.

Authors

Contributors to the AppleWorks Journal vary from issue to issue. Bylines accompany articles only occasionally. We often research or prepare articles on the suggestions of our readers. Feel free to ask our assistance on any AppleWorks problem.

Letters

Send your comments or questions for the Letters section to the Editor at the address listed above. Be sure to specify exactly what hardware you are using and your version of AppleWorks.

Christopher Van Buren, Editor & Publisher
Michael J. Biancalana, Contributing Editor
Robert Netro, Contributing Editor
Trudy Totty, Editorial Assistant

FileMaster gives you the choice of saving your changes to the disk specification. In other words, if your actions in FileMaster change the disk specification shown at the top left corner of the screen, you can choose whether that disk drive will change back to its previous state when you quit FileMaster to return to AppleWorks -- or whether it will retain the disk set in FileMaster. You can retain the FileMaster setting inside AppleWorks by pressing Open Apple - Return in stead of simply pressing Return when you quit FileMaster.

This is a benefit concerning FileMaster's *Change current disk* option, which lets you re-select the active disk drive location for all FileMaster commands. The option (accessed by typing Open Apple - Return) is much easier to use than the AppleWorks equivalent.

When you are using FileMaster's commands (such as copying files), you can easily specify a disk location including subdirectories by simply choosing from a list. This way, you don't have to remember the entire pathname when using subdirectories, unlike the AppleWorks *Change current disk* option.

FileMaster lists files with more information than AppleWorks. The file listing is shown in Figure 5. The first thing to notice is that FileMaster recognizes many types of files, not just AppleWorks files and "other."

The listing also shows whether or not the file is locked and whether or not the file has been backed up since any change has been made.

Finally, FileMaster will display the date and time the file was created (time requires a clock card).

While you're examining the list of files in FileMaster, you can press Open Apple - 9 to move to the bottom of the list, or Open Apple - 1 to move to the top. The Open Apple - Up and Open Apple - Down commands work on file listings also.

When choosing files for copying, deleting, comparing, etc., you can type Open Apple- Right Arrow to automatically select all files in the list, rather than selecting them one at a time.

When viewing the file listing, you can opt for a full-screen view by pressing the Open Apple - V command. An example of the result is shown in Figure 6. Up to 100 files are displayed at one time.

You can work with a subset of the files on your disk by applying some selection rules to the *List files* option. You can list files whose names begin with, end with, contain, or do not contain certain information. You can also list files of a certain type or all files that have been changed. One significant use for this information is when controlling FileMaster with macros from Ultra Macros. You can develop macros that perform operations on certain kinds of files -- automatically.

```
APLWORKS.SYSTEM  NOTEPAD.PP      TYPEWRITER.PP
APPOINTMENTS.PP  PP.06           USERSDISK
AUX.DICT.S       PRODOS
BASIC            PRODRIVE
BASIC.SYSTEM     QUICKLABEL.PP
CALCULATOR.PP    Rtn.MACRO
CALENDAR.PP      RUNRUN.APPLST
CATALYSTDESKTOP  RUNRUN.SYSTEM
COMM.PP          SEG.00
Delete.me        SEG.ER
DUMMY            SEG.H0
EXIT             SEG.H1
FILES            SEG.HH
GRAPHMERGE.PP    SEG.PR
KEYPLAYER.PP     SEG.XM
LOGONMAC.PP      SPELLER.PP
MACRO.SYSTEM     START
MACROS.GRADE.KP  STARTUP
MAIN.DICT        TEMP.MACRO
MEMORYWHD.PP     TEST

Press Space Bar to continue                    488K Avail.
```

Figure 6: Full screen vile listing using the List Files option and then Open Apple - V. notice that this list is alphabetized by file name. This was done with the Open Apple - A command.

FileMaster is a convenient and complete replacement for the System Utilities disk or the ProDOS Filer program. Its advantage is that it works inside AppleWorks.

Beagle Bros...(619) 296-6400

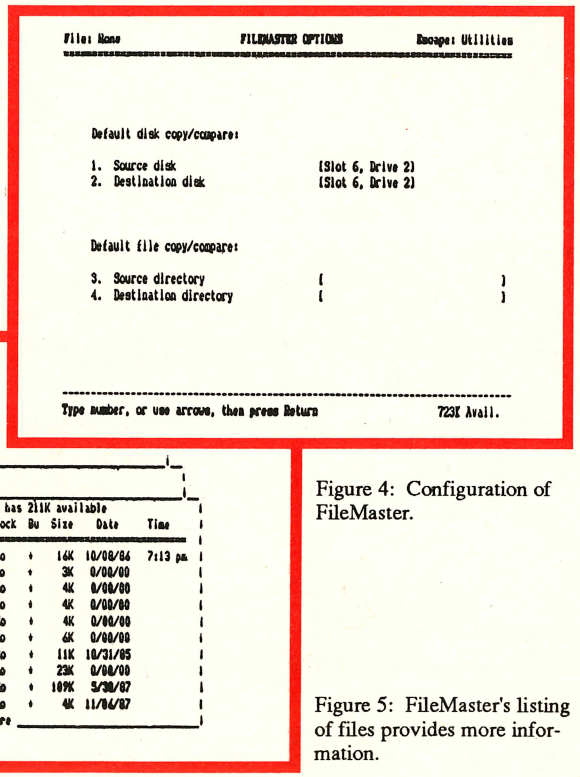
Files: None
FILEMASTER OPTIONS
Escape: Utilities
Default disk copy/compare:
1. Source disk
(Slot 6, Drive 2)
2. Destination disk
(Slot 6, Drive 2)
Default file copy/compare:
3. Source directory
4. Destination directory
Type number, or use arrows, then press Return
723K Avail.
Path: /APPLEWORKS
FileMaster
File Activities
List files
Subdirectory: /APPLEWORKS has 211K available
Name Type Lock Bu Size Date Time
PRODOS Sys No * 14K 10/08/86 7:13 pm
CATALYSTDESKTOP Txt No * 3K 0/00/00
SEG.00 Sys No * 4K 0/00/00
SEG.XM Sys No * 4K 0/00/00
SEG.RM Sys No * 4K 0/00/00
SEG.EL Bin No * 4K 0/00/00
BASIC.SYSTEM Sys No * 11K 10/31/85
SEG.H0 ??? No * 23K 0/00/00
SEG.H1 ??? No * 109K 5/30/87
SEG.PR Sys No * 4K 11/06/87
More

Figure 4: Configuration of FileMaster.

Figure 5: FileMaster's listing of files provides more information.